CLAIMS

What is claimed is:

1   1.   A method for reducing sparkle artifacts in a liquid
2   crystal imager, comprising the steps of:
3   gamma correcting a video drive signal; and
4   slew rate limiting at least a portion of said gamma
5   corrected video drive signal.

1   2.   The method claimed in claim 1, wherein said step of
2   gamma correcting further comprises the step of producing
3   an output containing a red gamma corrected video drive
4   signal component, a blue gamma corrected video drive
5   signal component, and a green gamma corrected video drive
6   signal component.

1   3.   The method claimed in claim 2, wherein at least one
2   of said gamma corrected video drive signal components is
3   slew rate limited.

1   4.   The method claimed in claim 1, comprising the further
2   steps of:
3   deinterlacing said video drive signal to provide a
4   deinterlaced video signal;
5   color space converting said deinterlaced video
6   signal; and
7   frame rate multiplying said color space converted
8   video signal,
9   said further steps taking place prior to gamma correcting
10 said frame rate multiplied video drive signal.

1   5.   The method claimed in claim 3, comprising the further
2   steps of independently selecting slew rate limits for

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3 each of said gamma corrected video drive signal
4 components.

6. An apparatus for reducing sparkle artifacts in a
liquid crystal imager, comprising:
    a device for gamma correcting a video drive signal
for providing a gamma corrected video drive signal; and
    a slew rate limiter for slew rate limiting said
gamma corrected video drive signal.

7. The apparatus claimed in claim 6, further comprising:
    a video display system for a liquid crystal imager
having a circuit for reducing sparkle artifacts in said
liquid crystal imager, said circuit comprising:
    a color space converter for color space converting
said video drive signal, wherein said gamma correcting
device gamma corrects said color space converted video
drive signal.

8. The apparatus claimed in claim 7, said circuit
further comprising means for frame rate multiplying said
color space converted video signal prior to said frame
rate multiplied video signal being gamma corrected.

9. The apparatus claimed in claim 8 wherein said gamma
corrected video drive signal further comprises a red
gamma corrected video drive signal component, a blue
gamma corrected video drive signal component, and a green
gamma corrected video drive signal component.

10. The apparatus claimed in claim 9, further comprising
means for independently selecting slew rate limits for
each of said gamma corrected video drive signal
components.

11. The apparatus of claim 6, wherein said slew rate
limiter further comprises a means for assuring that
successive output signals from said slew rate limiter
will not vary by more than a predetermined slew rate.

12. The apparatus of claim 11, wherein said slew rate
limiter further comprises:

an algebraic unit for providing a difference signal
representative of a difference between said gamma
corrected video drive signal and a preceding gamma
corrected slew rate limited output;

a latch for storing said preceding gamma corrected
slew rate limited output;

at least one comparator for determining whether said
difference exceeds said predetermined slew rate; and

a second algebraic unit for adding the output from
said at least one comparator to a brightness level of a
previous slew rated limited output pixel to generate a
next new pixel.

13. The apparatus of claim 12, wherein said at least one
comparator comprises a first comparator for determining
whether said difference signal is greater than a
predetermined positive slew rate and a second comparator
for determining whether said difference signal is more
negative than a predetermined negative slew rate.

14. The apparatus of claim 13, wherein the absolute
value of said predetermined positive slew rate and the
absolute value of said predetermined negative slew rate
are equal.

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15.   The apparatus of claim 12, wherein said slew rate
limiter further comprises a multiplexer that uses the
most significant bit of said difference signal as a
control input for selecting an output among said first
comparator and said second comparator.